

Cognitive Demands and Bias: Challenges Facing Clinical Competency Committees

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The Clinical Competency Committee is discussing what milestone level of professionalism to assign a resident. The discussion is reaching its end, and the Committee is about to designate a strong Level 4. Then 1 faculty member questions the rating, and mentions that the resident was 10 minutes late to clinic last week. Another member states that the resident missed a didactic session 3 months ago. A third faculty member pipes up and recalls that the resident didn't read an assigned article last year. A fourth member says, "Not good. Let's give her a Level 3." What happened?

In 2013, the Accreditation Council for Graduate Medical Education (ACGME) charged training programs to form a Clinical Competency Committee (CCC) to develop a method to assess residents' progression toward unsupervised practice, using the ACGME Milestones and based on residents' evaluations. The CCCs form 1 element of an integrated assessment system¹ and are an essential component of ACGME's new accreditation system.² The CCCs are expected to review residents' development semiannually and to assign and report milestone levels.²

Milestones are explicit outcome data of developing competencies. In their determination of appropriate, resident-specific milestone levels, CCCs integrate information gleaned from rotation evaluations, specific competency assessments, tests, and other data. The CCC members deliberate and determine the milestone level to report to the ACGME. The goal of this process is to improve feedback to residents, to "enhance credibility of judgments about resident/fellow performance,"¹ and to aid in program improvement and faculty development.

In CCC deliberations, members often need to make more than 20 milestone-level determinations per resident. This represents a high cognitive load, with

the potential for decision-making fatigue, which degrades decision-making processes.³

During assessment and decision making, bias can and does occur across settings.⁴ A study of judicial decisions found that after eating, court judges give more lenient sentences.⁵ When asked if this is true, judges denied the tendency. These judges, while striving to be impartial, demonstrate the unconscious operation of biases.⁵ Another example comes from the marketing of wine. The list price of a bottle of wine influences the subjective appraisal of its taste.⁶ Bias also occurs in elections. People correctly predict election winners in fields of unknown candidates, based solely on their appearance.⁷ Even in the appraisal of the scientific merit of journal manuscripts, reviewers display implicit bias.⁸

Bias may be hardwired.^{3,6} In the example of wine pricing, the more expensive the wine, the more it is experienced as pleasant, the more there is activation in the orbitofrontal cortex.⁶ Just altering the price of wine alters drinkers' experience and neuronal activity.⁶

Bias is normal and common.⁹ Bias typically has a negative connotation, but it does help us navigate our environment.¹⁰ Constantly monitoring for bias is not easy,¹⁰ especially during CCC meetings. (See the TABLE for examples of bias that can occur during CCC deliberations.)

There are several strategies to help minimize the effect of bias on decision making.¹⁰ Recognition of bias and motivation to change are key initial steps.¹¹ For CCC members, faculty development exercises may help raise awareness and build a shared vocabulary regarding bias (information provided as online supplemental material). Having CCC members role play scenarios written to elicit bias and label the types of bias is an option. This has been used successfully both within a local CCC and at a national workshop.¹²

To optimize the value of the data, many CCCs have turned to commercial resident management systems (RMS) to organize assessments and evaluations. Alternatively, a homegrown RMS can provide a

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Editor's Note: The online version of this article contains the Clinical Competency Committee faculty development exercise.

TABLE

Examples of Bias That Can Occur During Clinical Competency Committee (CCC) Deliberations

Bias	Definition	Example
Anchoring	Holding on to an initial observation or opinion and not acknowledging changes.	A poor patient history and physical examination performance by someone in PGY-1 may “anchor” in an attending’s mind and result in assigning a level that is too low later in residency.
Availability	Giving preference to data that are more recent or more memorable.	In a CCC meeting, an attending may give more weight to his or her own observations of a resident than to observations of attendings from other rotations.
Bandwagon	Believing things because others do.	Faculty member mentions an insignificant mishap by a resident, and other members join in and mention other minor mishaps that would not have been described otherwise.
Confirmation	Focusing on data that confirm an opinion and overlooking evidence that refutes it.	Faculty member with a negative opinion of a resident recalls a single instance of prescribing error and neglects the 99% of prescriptions written correctly.
Framing effect	Forming an opinion based on how data are presented.	Training director may frame a CCC task as demonstrating to the ACGME that the program is strong. Faculty may feel pressure to adjust level determinations and overrate residents in the later years of their training.
Groupthink	Judgment influenced by overreliance on consensus.	CCC members may choose not to challenge a level determination in order to preserve group camaraderie. Some committee members, such as senior faculty or the training director, may exert undue influence over other committee members. ^{1,11}
Overconfidence	Having greater faith in one’s ability to make a judgment than is justified.	CCC members may have too little data to determine a milestone level, yet feel comfortable selecting a level.
Reliance on gist	Judgments based more on context than on specific observation or measurement. ¹²	A member may think, “This is a strong resident; 2.5 is appropriate,” rather than detailing specific information gathered from evaluations to support choosing that level.
Selection	Relying on partial information that is not truly random or representative.	A faculty member may meet the training director by chance in the hallway and describe a resident’s minor breach of professionalism. Had he or she not met the training director, the story might not have been relayed. Now the training director may place too much emphasis on the event during CCC discussions.
Visceral	Judgment influenced by emotions rather than objective data.	A “favored” or personally attractive resident may receive a higher level than another resident for a similar performance.

Abbreviations: PGY, postgraduate year; ACGME, Accreditation Council for Graduate Medical Education.

platform tailored for CCC use. One such program, Harvard South Shore–Milestones Dashboard (HSS-MD), is a Microsoft Excel–based dashboard that is highly visual, adaptable, efficient, portable, and free. It graphs competency development over time, which enables committee members to detect problems in residents’ progress. It handles all residents’ data equitably and transparently. It reduces concerns about summarizing objective observations, cognitive overload, and biased decision making. The HSS-MD generates a mean that serves as an initial milestone level for CCC deliberations.¹

Committee members must give reasons for overriding the precalculated milestone subcompetency

level, and, in the course of the discussion, the CCC has time to consider potential bias. For example, if the HSS-MD derived level for a resident’s subcompetency Patient Care 1 is “2,” and a faculty member thinks it should be “3.5,” then the faculty member must justify the higher level. If the faculty member says, “Because yesterday I saw Dr. X perform an efficient and compassionate H&P,” then others can ask if availability bias is occurring. The faculty member is disregarding 6 months’ worth of data in favor of 1 recent patient interaction. Other committee members might respond with, “It sounds like Dr. X performed a stellar examination yesterday. I wonder if focusing on that examination, rather than including all the data

from rotations, might be an example of availability bias. Perhaps ‘2’ is the appropriate level for now, and it is encouraging that Dr. X can also perform at a higher level at times.” By arguing for a different level and labeling the potential bias, committee members can become more aware of their own biases and more thoughtful in their comments. In our experience, CCC members are open to learning and talking about bias, and they appreciate the opportunity to reflect on their statements.

To keep the issue of bias central to the discussions, CCCs can print out copies of examples of bias (TABLE) and refer to them during the meeting. This can help build a shared vocabulary and awareness.

A Clinical Competency Committee cannot avoid the challenges of cognitive demand or bias. No individual or group assessment can be entirely objective. By being more mindful of the potential for bias and by developing a shared vocabulary to describe the bias, CCCs can mitigate its effects. The use of a clear protocol and an easily assimilated database can also help decrease bias.

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